PTO/SB/21 (04-07)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 19

Application Number	10/619,061
Filing Date	07/14/2003
First Named Inventor	Richard Thomas Gray
Art Unit	1751
Examiner Name	Brian P. Mruk
Attorney Docket Number	A01182

ENCLOSURES *(Check all that apply)*

- [x] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [x] Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) (please identify below):

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Rohm and Haas Company		
Signature	Carl P. Hemenway		
Printed name	Carl P. Hemenway		
Date	June 25, 2007	Reg. No.	51,798

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	Carl P. Hemenway		
Typed or printed name	Carl P. Hemenway	Date	June 25, 2007

PTO/SB/17 (06-07)
Approved for use through 06/30/2007. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2007

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($)	500

Complete if Known	
Application Number	10/619,061
Filing Date	07/14/2003
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METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 18-1850 Deposit Account Name: Rohm and Haas Company

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 20 or HP =	_____	x _____	= _____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 or HP =	_____	x _____	= _____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims Fee ($)	Multiple Dependent Claims Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____ / 50 =	_____ (round up to a whole number)	x _____	= _____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge): Filing Appeal Brief	500

SUBMITTED BY

Signature	Carl P. Hemenway	Registration No. (Attorney/Agent) 51,798	Telephone 215-619-5242
Name (Print/Type)	Carl P. Hemenway		Date June 25, 2007

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GROUP ART UNIT: 1751

APPEAL NO.: _____

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

APPELLANTS' BRIEF

Richard Thomas Gray, et. al.

Application for Patent Filed 07/14/2003

Serial No. 10/619,061

Technical Center Group No.: 1751

TRIGGERED RESPONSE COMPOSITIONS

Carl P. Hemenway
Agent for Appellants

Brian P. Mruk,
Examiner

Enclosed:
Appeal Brief
Fee via Deposit Account Form (in duplicate)
Transmittal Form, including a Certificate of Transmission

DN A01182

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	Richard Thomas Gray, et. al.			
Application No.	:	10/619,061	**Group No.**	:	1751
Filed:	:	07/14/2003	**Examiner**	:	Brian P. Mruk
For	:	TRIGGERED RESPONSE COMPOSITIONS			

Mail Stop Appeal Brief - Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

BRIEF FOR APPELLANTS

This is an appeal from the rejection by the Examiner dated January 26, 2007 finally rejecting claims 1, 3, and 9-12 Appellants filed a Notice of Appeal pursuant to 37 CFR § 1.191 on April 25, 2007

Also enclosed is an authorization to charge payment of the fee for filing of the Appeal Brief to Deposit Account 18-1850.

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TABLE OF CONTENTS

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REAL PARTY IN INTEREST [37 CFR 41.37(c)(1)(i)]:

This application and the invention disclosed therein are the property of Rohm and Haas Company, a Delaware corporation.

RELATED APPEALS AND INTERFERENCES [37 CFR 41.37(c)(1)(ii)]:

There are no appeals or interferences related to the subject matter of this application.

STATUS OF CLAIMS [37 CFR 41.37(c)(1)(iii)]:

The status of the claims is as follows:

Allowed:	none
Objected to:	none
Cancelled:	2 and 4-8
Pending:	1, 3, and 9-12
Rejected:	1, 3, and 9-12
On Appeal:	1, 3, and 9-12

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STATUS OF AMENDMENTS [37 CFR 41.37(c)(1)(iv)]:

Claims 1, 3, and 9-12, the pending claims, are set out in the Appendix.

On October 31, 2006, Applicant filed amendments in response to a non-final rejection, and those amendments were entered. No amendments have been submitted after October 31, 2006.

SUMMARY OF CLAIMED SUBJECT MATTER [37 CFR 41.37(c)(1)(v)]:

The following is a concise summary of the invention, with references to pages and line numbers of the specification in which each feature of the invention is disclosed.

As recited in claim 1

The present invention, as recited in independent claim 1, relates to the field of triggered response composition (p. 1. lines 3-8). The composition comprises polyelectrolyte (p. 6, lines 13-17), which is in contact with an aqueous system (p. 1, line 8). The composition is stable and insoluble in an aqueous system at relatively high ionic strength (p. 4, lines 20-21), where high ionic strength is defined as equivalent to 0.5 M sodium chloride or higher (p. 25, line 5). The composition has the characteristic that, when in contact with an aqueous system at low ionic strength, it disperses, disintegrates, dissolves, destabilizes, swells, or combinations thereof (p. 4, lines 21-23), where low ionic strength is defined as equivalent to less than 0.1 M sodium chloride (p. 13, line 19). The polyelectrolyte is an alkali soluble polymer (p. 7, lines 5-6) that has weight average molecular weight of 1,000 to 20,000 (p. 20, line 11). The alkali swellable polymer comprises:

(a) 5-70 weight percent of acidic monomers (p.4, line 27) selected from methacrylic acid or acrylic acid (p. 11, line 32);

(b) 30-95 weight percent of nonionic vinyl monomers (p. 4, line27-28) selected from butyl acrylate, styrene, and methyl methacrylate (p. 12, lines 23-26); and

(c) 0.05-5 weight percent of one or more crosslinking agents (p. 5, lines 16-17) selected from the group consisting of alkaline earth ions calcium, magnesium, and barium (p. 14, lines 27-28).

The aqueous system comprises fabric (p. 1, line 20 and p. 28, lines 25-26).

As recited in claim 3

The triggered response composition as recited in claim 1, with the additional features that the triggered response composition further comprises one or more active ingredient and that the polyelectrolyte surrounds the active ingredient(s) (p. 4, lines 2-3).

As recited in claim 9

A triggered response composition that is the same as the triggered response composition recited in claim 1 except that item (c) of the polymer is different. In the invention as recited in claim 9, part (c) is as follows:

(c) 0.05-5 weight percent of one or more transition metal ion crosslinking agents (p. 5, lines 16-17) selected from the group consisting of iron, copper, and zinc (p. 14, line 28).

As recited in claim 10

The triggered response composition as recited in claim 9, with the additional features that the triggered response composition further comprises one or more active ingredient and that the polyelectrolyte surrounds the active ingredient(s) (p. 4, lines 2-3).

As recited in claim 11

The triggered response composition as recited in claim 9, with the additional feature that the aqueous system is a fabric laundry wash cycle (p. 28, line 26).

As recited in claim 12

The triggered response composition as recited in claim 1, with the additional feature that the aqueous system is a fabric laundry wash cycle (p. 28, line 26).

GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL [37 CFR 41.37(c)(1)(vi)]:

The ground for rejection to be reviewed on appeal is whether claims 1, 3, and 9-12 can be considered patentable under 35 USC §103(a) over Bardman (US 6,710,161).

ARGUMENT [37 CFR 41.37(c)(1)(vii)]:

Patentability of Claims 1 and 9

Present claims 1 and 9 recite one or more polyelectrolytes in contact with an aqueous system, "wherein said aqueous system comprises fabric." Appellants submit that Bardman does not teach or suggest this feature.

The term "comprise" is a synonym for "contain" (see, for example, MPEP §2111.03). Thus, present claims 1 and 9 recite an aqueous system that contains fabric.

Bardman's teachings include discussion of compositions applied to substrate. Bardman teaches "a polymer composition" (col. 1, line 9) in which "the polymer composition contains copolymer particles dispersed in an aqueous medium" (col. 4, 62-63). Bardman further teaches "applying a polymer composition onto a substrate" (col. 1, line 66), and Bardman teaches that substrates may include "woven and nonwoven materials such as cloth, wool, synthetic and natural fiber, and textiles" (col. 15, lines 66-67). Bardman teaches that his polymer composition may be used as a paint, coating, saturant, primer, ink, varnish, or adhesive (col. 16, lines 1-10).

Appellants submit that a substrate to which an aqueous composition has been applied does not constitute an aqueous system that contains the substrate. Appellants

submit that "aqueous system" is a well known term in the art and that it means a fluid composition. To illustrate the meaning of the term "aqueous system," appellants display below a sampling of granted US patents (involving a variety of inventors and assignees) and the sentence in each patent in which "aqueous system" is used.

US 6,162,877:

"One such highly filled aqueous system is the latex paint, which is composed of a dispersion of a polymeric latex, pigment and clays and other additives in water" (col. 1, lines 14-15).

US 6,093,240:

"In conjunction with the recent increasing public concern about environment protection, active research works have been made to substitute aqueous systems for solvent system paint and coating compositions" (col. 1, lines 15-18).

US 6,056,814:

"The pigment composition according to the present invention is readily dispersed into an aqueous system to obtain an aqueous pigment dispersion" (abstract).

US 6,069,217:

"The thickening composition are used to provide improved viscosity control, flow and leveling to aqueous systems such as paints and coatings, inks, drilling fluids, adhesives, construction materials, personal care and household products" (abstract).

In each of the above samples, "aqueous system" is used in a way that means a fluid composition such as, for example, a paint, a coating, or a pigment dispersion. Appellants submit that these samples illustrate the normal meaning of "aqueous system."

In view of the meaning of "aqueous system," as established herein above, the recitation of an aqueous system that contains fabric is a recitation that the fabric is in the

fluid composition. One example of a fluid composition that contains fabric is a laundry wash cycle, as discussed in the present specification (p. 3, line 13).

Appellants submit that Bardman's disclosure of substrate to which an aqueous fluid composition has been applied does not constitute a disclosure of an aqueous system that contains that substrate. Bardman does not teach that cloth or any substrate may be contained in his aqueous fluid composition.

Additionally, Appellants submit that Bardman's disclosure of application of aqueous fluid composition to cloth substrate does not suggest to a person of ordinary skill in the art the use of an aqueous system that contains fabric. A disclosure of applying a fluid composition to a substrate does not constitute a suggestion to make a fluid composition that contains that substrate. For example, there are many disclosures in the art that teach applying a paint to wood, but a person of ordinary skill would not consider that such disclosures constitute a suggestion to make a paint that contains wood. Similarly, Bardman's disclosure of application to cloth substrate does not constitute a suggestion to make an aqueous system that contains cloth.

In sum, Appellants submit that Bardman does not teach or suggest the feature of present claims 1 and 9 of an aqueous system that comprises fabric. Therefore Appellants submit that present claims 1 and 9 are not obvious over Bardman.

Appellants respectfully request the Board to reverse the Examiner's rejection and to pass Appellants' claims 1 and 9 to allowance at this time.

Patentability of Claims 3 and 10

Appellants submit that present claims 3 and 10 are not obvious over Bardman for the reasons set forth herein above regarding present claims 1 and 9. In addition, Appellants submit that there are at least two additional independent reasons why present claims 3 and 10 are not obvious over Bardman.

First, Appellants submit that Bardman does not teach or suggest a composition in which a polyelectrolyte surrounds an active ingredient.

Bardman teaches composite particles, which he defines as "pigment particles surrounded by a plurality of copolymer particles" (col. 13, lines 32-33). Bardman

teaches, "The copolymer particles may fully cover the surface of the pigment particle to provide an encapsulating layer or may partially cover the pigment particle surface" (col. 13, lines 18-21).

Appellants submit that pigment particles do not fall within the category of "active ingredient." Pigment particles are not considered "active" by persons of ordinary skill in the art. The present specification illustrates the meaning of "active ingredient" (synonymous in the present specification with "beneficial agent") on p. 26, lines 12-28. The list includes a wide variety of materials that are active in various ways but does not include pigment. Therefore, in this case, the description in the present specification and the common usage of the term "active ingredient" would not include pigment particles.

Consequently, Appellants submit that Bardman's teachings regarding pigment particles encapsulated by copolymer particles do not teach or suggest a composition in which active ingredient (which is different from pigment particle) is surrounded by polyelectrolyte.

Bardman teaches that dispersant may be present in the aqueous medium of his invention (col. 14, lines 47-48). Bardman does not teach that dispersant may be surrounded by copolymer. Bardman teaches that "the dispersant may be added at levels which do not inhibit or prevent the adsorption of the copolymer particle to the pigment particle" (col. 16, lines 52-54). That is, in Bardman's teachings, the copolymer particle adsorbs onto the pigment particle without inhibition by the dispersant. Bardman is therefore teaching that dispersant molecules do not reside between pigment particle surface and copolymer particles. A necessary consequence of Bardman's teaching is that, in the situation taught by Bardman in which copolymer particle encapsulates pigment particle, dispersant molecules are excluded from that encapsulation. That is, Bardman teaches that dispersant will not be surrounded by copolymer particles.

To summarize: Bardman does not teach or suggest a situation in which copolymer surrounds active ingredient. Bardman's teaching regarding pigment particles does not constitute a teaching or suggestion for the use of active ingredient surrounded by copolymer. Bardman teaches that dispersant is not surrounded by copolymer. Bardman makes no other teaching or suggestion toward polyelectrolyte surrounding active

ingredient. Therefore, Appellants submit that the feature of active ingredient surrounded by polyelectrolyte provides an independent reason why present claims 3 and 10 are not obvious over Bardman.

Second, Appellants submit that Bardman teaches that only certain copolymers of specified molecular weight are suitable for surrounding other materials. When Bardman discusses formation of "composite particle," he teaches, "The composite particle may contain copolymer particles of weight average molecular weight of at least 50,000, preferably of at least 250,000, and more preferably of at lease 500,000, as measured by gel permeation chromatography" (col. 13, lines 48-51). That is, Bardman teaches that when his copolymer is employed in a manner that surrounds another material, the only copolymers that are suitable are those with weight average molecular weight of at least 50,000. Bardman makes no teaching or suggestion that copolymer of lower molecular weight may be used for surrounding another material.

In contrast, present claims 3 and 10 recite polyelectrolyte that surrounds active ingredient, where the polyelectrolyte has weight average molecular weight of 1,000 to 20,000. Therefore, Appellants submit that the combination of surrounding active ingredient and weight average molecular weight provides a second independent reason why present claims 3 and 10 are not obvious over Bardman.

Appellants respectfully request the Board to reverse the Examiner's rejection and to pass Appellants' claims 3 and 10 to allowance at this time.

Patentability of Claims 11 and 12

Appellants submit that present claims 11 and 12 are not obvious over Bardman for the reasons set forth herein above regarding present claims 1 and 9. In addition, Appellants submit that there is an additional independent reason why present claims 11 and 12 are not obvious over Bardman. Appellants submit that the feature recited in present claims 11 and 12 that the aqueous system is a laundry wash cycle is not taught or suggested by Bardman.

As discussed herein above, Bardman discloses applying his copolymer composition to substrate. Bardman illustrates various uses for application of copolymer

composition to substrate by teaching the copolymer composition may be used as paint, coating, saturant, primer, ink, varnish, or adhesive (col. 16, lines 1-10).

Appellants submit that these teachings do not encompass use of copolymer composition as a laundry wash cycle. Appellants submit that applying copolymer composition to substrate is different from using copolymer composition as laundry wash cycle. That is, the universe of activities encompassed by the concept of applying composition to substrate does not include using that composition as a laundry wash cycle. Therefore Appellants submit that disclosure of substrate with applied copolymer composition does not teach or suggest a polyelectrolyte in contact with a laundry wash cycle.

The examples of uses given by Bardman suggest material systems that are different from laundry wash cycles. Bardman's example uses (paint, ink, etc.) all involve deposition of most or all of the copolymer onto substrate in a permanent manner. Such uses are fundamentally different from using a composition as laundry wash cycle, in which all or nearly all materials are intended to be removed from the substrate.

In sum, Bardman does not teach or suggest laundry wash cycle. Therefore, Appellants submit that this feature provides a reason why present claims 11 and 12 are not obvious over Bardman.

Appellants respectfully request the Board to reverse the Examiner's rejection and to pass Appellants' claims 11 and 12 to allowance at this time.

Respectfully Submitted,

Carl P. Hemenway

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Agent for Appellants
Registration No. 51,798

Date: June 25, 2007

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CLAIMS APPENDIX [37 CFR 41.37(c)(1)(viii)]

Pending Claims

1. A triggered response composition comprising: one or more polyelectrolytes in contact with an aqueous system that is stable and insoluble in an aqueous system at an ionic strength equivalent to 0.5 M sodium chloride or higher and when in contact with an aqueous system at an ionic strength equivalent to less than 0.1 M sodium chloride, the composition disperses, disintegrates, dissolves, destabilizes, swells, or combinations thereof; wherein the polyelectrolyte is one or more alkali soluble polymers having a weight average molecular weight between 1,000 and 20,000 comprising: (a) 5-70 weight percent of acidic monomers selected from methacrylic acid or acrylic acid; (b) 30-95 weight percent of one or more non-ionic vinyl monomers selected from butyl acrylate, styrene and methyl methacrylate and (c) 0.01 to 5 weight percent of one or more cross-linking agents selected from the group consisting of alkaline earth ions calcium, magnesium and barium, wherein said aqueous system comprises fabric.

2. (cancelled)

3. A barrier composition comprising: one or more triggered response composition of claim 1, further comprising one or more active ingredients, and wherein said polyelectrolyte surrounds said active ingredients.

4. - 8. (cancelled)

9. A triggered response composition comprising: one or more polyelectrolytes in contact with an aqueous system that is stable and insoluble in an aqueous system at an ionic strength equivalent to 0.5 M sodium chloride or higher and when in contact with an aqueous system at an ionic strength equivalent to less than 0.1 M sodium chloride, the composition disperses, disintegrates, dissolves, destabilizes, swells, or combinations thereof; wherein the polyelectrolyte is one or more alkali soluble polymers having a weight average molecular weight between 1,000 and 20,000 comprising: (a) 5-70 weight percent of acidic monomers selected from methacrylic acid or acrylic acid; (b) 30-95 weight percent of one or more non-ionic vinyl monomers selected from butyl acrylate, styrene and methyl methacrylate and (c) 0.01 to 5 weight percent of one or more transition metal ion cross-linking agents selected from the group consisting of iron, copper, and zinc, wherein said aqueous system comprises fabric.

10. A barrier composition comprising: one or more triggered response composition of claim 9, further comprising one or more active ingredients, and wherein said polyelectrolyte surrounds said active ingredients.

11. The triggered response composition of claim 9, wherein said aqueous system is a fabric laundry wash cycle.

12. The triggered response composition of claim 1, wherein said aqueous system is a fabric laundry wash cycle.

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EVIDENCE APPENDIX [37 CFR 41.37(c)(1)(ix)]

none

DN A01182 PATENT

RELATED PROCEEDINGS APPENDIX [37 CFR 41.37(c)(1)(x)]

none